

IN THE CLAIMS

Please amend the claims as follows:

Please cancel Claims 1-8.

9. (previously presented) A system for performing a pattern match search for a data string having a plurality of characters separated by delimiters, said system comprising:

means for defining a subset of characters as delimiters such that all remaining characters are defined as non-delimiters;

means for constructing a search key by:

generating a full match search increment comprising the binary representation of a data string element, wherein said data string element includes a plurality of non-delimiters between a pair of delimiters; and

concatenating a pattern search prefix to said full match search increment to form said search key, wherein said pattern search prefix is a cumulative pattern search result of all previous full match search increments;

means for performing a full match search within a lookup table utilizing said search key;

means for returning to said constructing a search key, in response to finding a matching pattern within said lookup table; and

means for utilizing the previous full match search result to process said data string, in response to not finding a matching pattern within said lookup table.

10. (previously presented) The system of claim 9, wherein said system further includes processing means for pointing to a character within said data string prior to constructing a search key.

11. (previously presented) The system of claim 10, wherein said processing means for constructing a search key further comprises:

means for evaluating said character to determine whether or not said character is a delimiter;

means responsive to said character being a delimiter for:

delivering a full match search increment into a search key register, wherein said search increment comprises a binary representation of all non-delimiters between said delimiter and an immediately preceding delimiter; and

concatenating said pattern search prefix to said search increment within said search key element;

means responsive to said character not being a delimiter for appending a binary representation of said character to said search increment; and

means for incrementing said pointer.

12. (previously presented) The system of claim 9, wherein said system further includes means responsive to finding a matching pattern for updating said pattern search prefix.

13. (previously presented) The system of claim 9, wherein said means for performing a full match search further comprises:

means for determining whether or not a full match for said search key exists within said hash table by:

hashing said search key to produce a hash key result;

indexing a hash table utilizing said hash key result to find a matching stored pattern; and

resolving collisions in said hash table utilizing a pattern search control block.

14. (previously presented) The system of claim 9, wherein said data string is a Universal Resource Indicator address, and said data string element is a URI element.

15. (previously presented) The system of claim 14, wherein said delimiters include period characters or slash characters.

16. (previously presented) The system of claim 14, wherein said means for constructing a search key further comprises:

means for scanning an IP data packet to determine a first URI element to be parsed;

means for initializing a URI pointer to a first character within said first URI element; and

means for initializing said pattern search prefix to zero.

17. (previously presented) A computer program product for performing a pattern match search for a data string having a plurality of characters separated by delimiters, said computer program product comprising:

instruction means for defining a subset of characters as delimiters such that all remaining characters are defined as non-delimiters;

instruction means for constructing a search key by:

generating a full match search increment comprising the binary representation of a data string element, wherein said data string element includes a plurality of non-delimiters between a pair of delimiters; and

concatenating a pattern search prefix to said full match search increment to form said search key, wherein said pattern search prefix is a cumulative pattern search result of all previous full match search increments;

instruction means for performing a full match search within a lookup table utilizing said search key;

instruction means for returning to said constructing a search key, in response to finding a matching pattern within said lookup table; and

instruction means for utilizing the previous full match search result to process said data string, in response to not finding a matching pattern within said lookup table.

18. (previously presented) The computer program product of claim 17, wherein said computer program product further includes instruction means for pointing to a character within said data string prior to constructing a search key.

19. (previously presented) The computer program product of claim 18, wherein said instruction means for constructing a search key further includes:

instruction means for evaluating said character to determine whether or not said character is a delimiter;

instruction means responsive to said character being a delimiter for:

delivering a full match search increment into a search key register, wherein said search increment comprises a binary representation of all non-delimiters between said delimiter and an immediately preceding delimiter; and

concatenating said pattern search prefix to said search increment within said search key element;

instruction means responsive to said character not being a delimiter for appending a binary representation of said character to said search increment; and

instruction means for incrementing said pointer.

20. (previously presented) The computer program product of claim 17, wherein said computer program product further includes instruction means responsive to finding a matching pattern for updating said pattern search prefix.

21. (previously presented) The computer program product of claim 17, wherein said instruction means for performing a full match search further includes:

instruction means for determining whether or not a full match for said search key exists within said hash table by:

hashing said search key to produce a hash key result;

indexing a hash table utilizing said hash key result to find a matching stored pattern; and

resolving collisions in said hash table utilizing a pattern search control block.

22. (previously presented) The computer program product of claim 17, wherein said data string is a Universal Resource Indicator address, and said data string element is a URI element.

23. (previously presented) The computer program product of claim 22, wherein said delimiters include period characters or slash characters.

24. (previously presented) The computer program product of claim 22, wherein said instruction means for constructing a search key further includes:

instruction means for scanning an IP data packet to determine a first URI element to be parsed;

instruction means for initializing a URI pointer to a first character within said first URI element; and

instruction means for initializing said pattern search prefix to zero.